PENGARUH MEROKOK TERHADAP PERTUMBUHAN BAKTERI STREPTOCOCCUS MUTANS DALAM SALIVA

(EFFECT OF CLOVE CIGARETTES ON THE GROWTH OF SALIVARY STREPTOCOCCUS MUTANS)

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Abstract

Smoking may increase dental caries prevalence, meanwhile dental caries is primarily caused by Streptococcus mutans. The aim of this research was to investigate the effect of clove cigarette smoking on the growth of salivary Streptococcus mutans. In this cross-sectional study, twenty healthy male subjects aged 17 to 25 years was volunteered to join this study. Those subjects were divided into smoking and non-smoking group. Subjects in the smoking group had smoked regularly 6 to 9 clove cigarettes per day for 25 to 35 months. Both groups were asked not to brush their teeth at night before sample was taken. Before having breakfast in the early morning, unstimulated saliva was collected into a tube. The collected saliva was diluted using potassium phosphate buffer and then cultured on spesific S. mutans media agar (TYS20B agar). Streptococcus mutans colonies were identified as milky white colonies. After three days of anaerobic incubation at 37°C, the S. mutans colonies were counted. Data was analyzed using unpaired student’s t test. The result showed that S. mutans colonies in the smoking group was significantly higher than the non-smoking group (p<0.05). This study indicated that smoking could increase the growth of S. mutans in saliva. In conclusion, smoking increase the growth of salivary streptococcus mutans.

Key words: Streptococcus mutans, clove cigarette, smoking, saliva